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LATCH FASTENER

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Fig. 1

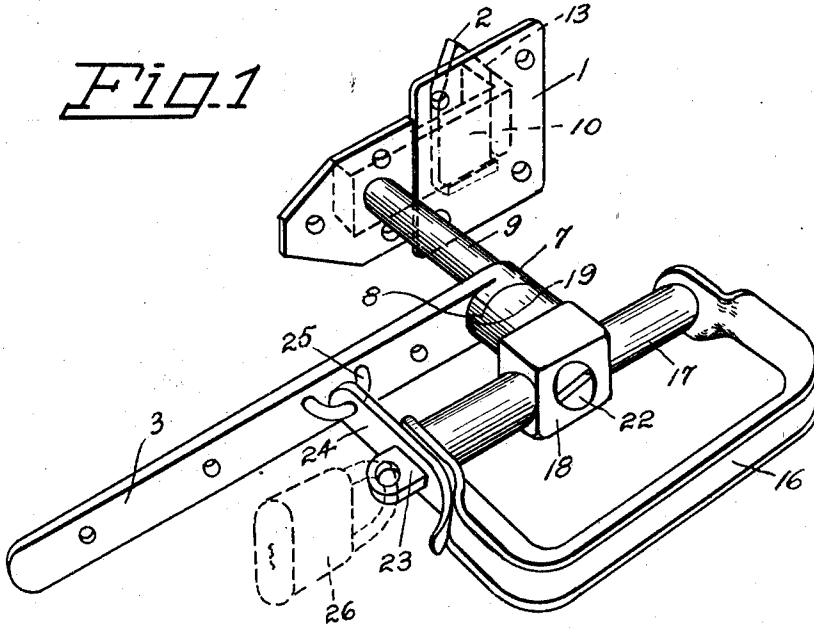
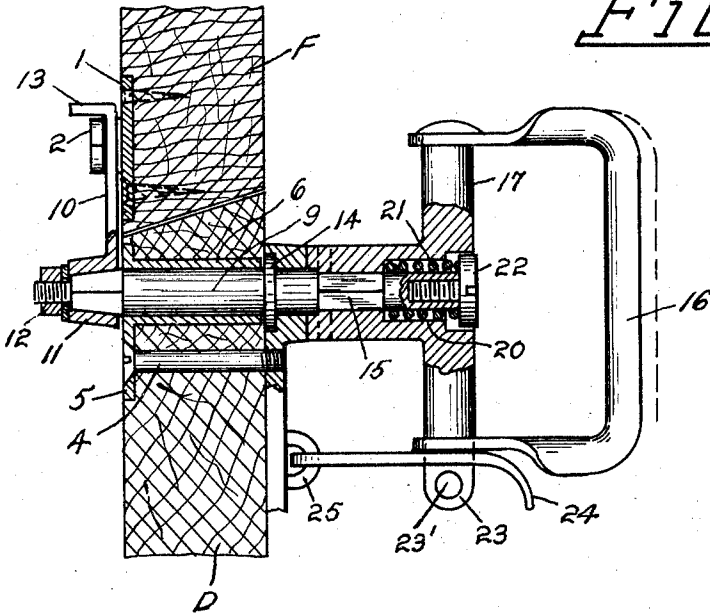


Fig. 2



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LATCH FASTENER.

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My present invention relates to an improved latch fastener especially adapted for use in connection with a padlock on doors of garages, barns, etc., and also adapted for use without the padlock as a door latch, thus combining the locking features and latching features for the door in the single device.

The latch fastener involves the use of a rotary bolt or spindle its handle, and the latch mechanism operated thereby, together with the padlock device, all of which are combined and arranged in such manner as to provide a convenient device of this character which is simple in construction and operation, durable, compactly arranged, and which may be manufactured at comparatively low cost of production.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention wherein the parts are combined and arranged according to the best mode I have thus far devised for the practical application of the principles of my invention.

Figure 1 is a perspective view with parts in dotted lines, showing the device as a whole and in locked position.

Figure 2 is a top plan view partly in section of the latched device, showing also a portion of the door and door frame.

In the drawings wherein I have illustrated a preferred form of my invention the general assembly of the device is shown in Figure 1 and the general arrangement with relation to the door D and its frame F are illustrated in Figure 2.

On the interior side or face of the door frame the plate 1 is attached and provided with an ear or keeper 2 located adjacent the edge of the door and adapted to receive the bolt 10 of the latch device.

On the exterior face of the door D a horizontally arranged strap 3 is rigidly attached as by screws 4 and these screws also secure the inside plate 5 at the inner side of the door. The inside plate is fashioned with an integral sleeve or cylinder 6 extending transversely through the door, which is mortised for the purpose, and alined with an open head 7 fashioned integral with the outside plate 3. This head is provided with one or more radial notches 8 in its outer face for use in connection with a lug 19 of the handle device as will be described.

A spindle 9 is supported to turn in the

sleeve 6 and extends transversely through the door with a latch bolt 10 at its inner end for co-action with the keeper 2. The latch bolt has a head 11 on the end of the spindle and a securing nut 12 on the reduced threaded end of the spindle clamps the latch bolt rigidly with the spindle so that the two may turn together. At the free end of the bolt an angular flange or lug 13 is provided, and it will be apparent that the latch fastener may be used with either a swinging door or a sliding door. The lug 13 is especially effective for use when the latch is carried by a sliding door, as it prevents (in co-action with the keeper 2) the door being pulled away from the frame F in Figure 2. When the latch fastener is carried by a swinging or hinged door, the former co-acts with the frame to prevent opening of the door. In either event the door may be opened by first turning the spindle to disengage the latch bolt from its keeper and bring it to position free of the door frame.

The spindle 9 is provided with a thrust flange 14 or annular shoulder 14 and the head 7 is countersunk to fit over this shoulder or thrust flange and retain the spindle against longitudinal movement. Beyond the head 7 the spindle is fashioned with a squared or polygonal shaft 15 which is of sufficient length to support the handle device of the latch fastener.

The handle includes a yoke 16 which carries a rigid cross bar 17 and this bar is provided with a rigid head 18 having the tooth or lug 19 for engagement with the notch 8 of the head 7 on plate 3. With the lug or tooth in the notch as shown in the two figures of drawing it will be apparent that the handle, and therefore the spindle, cannot be turned. To release the handle for turning, it is pulled outwardly to the position indicated by dotted line in Figure 2.

The head 18 is fashioned with a counter-bored socket 20 in which a spring 21 is located and retained by the head of the screw 22 threaded into the threaded end of the spindle shank.

The soiled spring 21, it will be apparent, provides resilient means for holding the lug of the head 18 in the notch 8 of the head 7 and the bolt is thus retained in latched or closed position as in the drawings. To turn the latch bolt the handle is pulled outwardly and the handle turned to turn the spindle.

For fastening the latch bolt in position the end 23 of the cross bar 17 is arranged to project through the handle 16 at one end and is perforated at 23'. A hasp 24 is designed to slip over this perforated end of the bar and is pivoted at 25 on the outside plate 3. The shackle of a padlock 26 is passed through the perforated end 23 of the cross bar after the hasp has been placed in position and after the padlock has been locked in usual manner the handle cannot be turned to release the latch, nor can the handle be pulled outwardly to release the spindle for turning. With the padlock holding the hasp in locked position the door is securely fastened and can only be unfastened after the padlock has been released.

In the absence of the padlock the device is adapted for use as a door latch and it may readily be manipulated by first pulling on the handle to release the latter after which the spindle and latch may be turned by turning the handle as described.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. The combination with a supporting sleeve and notched head, of a latch spindle having a shank and a handle having a head slidable on the shank, a lug on the handle head for engagement with said notched head, and a spring interposed between the handle head and a part of the shank to prevent disengagement of the lug and notched head.

2. The combination with a supporting sleeve and notched head, of a latch spindle having a shank, a handle having a cross bar, a head on the handle slidable on the shank, a lug on the slidable head for engaging the notched head and a spring for retaining the lug in the notched head, a hasp for engaging one end of the cross bar and a padlock for use with the cross bar for retaining the hasp.

In testimony whereof I affix my signature.

GUSTAV A. LEE.